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CERTIFICATE OF FACSIMILE TRANSMISSION I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office on the date indicated below.		APPLICATION NO. 10/724,299 FILING DATE 11/26/2003 FIRST NAMED INVENTOR Raffi Codilian ART UNIT 2841 CONFIRMATION NO. 1174 EXAMINER Yurly Semenenko ATTORNEY DOCKET NO. K35A1398
Renee M. Franks Typed/Printed Name  Signature December 18, 2006 Date	TITLE DISK DRIVE PRINTED CIRCUIT BOARD WITH COMPONENT-DEDICATED ALIGNMENT LINE INDICATORS INCLUDING INNER AND OUTER LINE SEGMENTS	

ATTACHED WITH THIS SUBMISSION:

1. Transmittal Form (1 page)
2. Fee Transmittal for FY 2006 (1 page)
3. Appeal Brief Under 37 CFR § 41.37 (15 pages)

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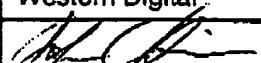
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Total Number of Pages In This Submission

Application Number	10/724,299
Filing Date	11/26/2003
First Named Inventor	Raffi Codilian
Art Unit	2841
Examiner Name	Yuriy Semenenko
Attorney Docket Number	K35A1398

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
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Firm Name	Western Digital		
Signature			
Printed name	Joshua C. Harrison, Ph.D., Esq.		
Date	December 18, 2006	Reg. No.	45,686

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Typed or printed name	Renee M. Franks		Date
			December 18, 2006

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

**FEE TRANSMITTAL
For FY 2006** Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 500

Complete if Known

Application Number	10/724,299
Filing Date	11/26/2003
First Named Inventor	Raffi Codilian
Examiner Name	Yuriy Semenenko
Art Unit	2841
Attorney Docket No.	K35A1398

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order None Other (please identify): _____

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FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fee Paid (\$)
	Fee (\$)	Small Entity	Fee (\$)	Small Entity	Fee (\$)	Small Entity	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Small Entity

Fee (\$)

Fee (\$)

Fee (\$)

50 25

Each independent claim over 3 (including Reissues)

200 100

Multiple dependent claims

360 180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims
- 20 or HP =	x 50	=		Fee (\$)

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Fee (\$)	Fee Paid (\$)
- 3 or HP =	x 200	=			

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x		

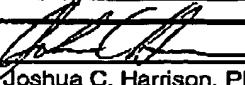
4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Filing a brief in support of an appeal (FC 1402)

Fee Paid (\$)

500

SUBMITTED BY		Registration No. (Attorney/Agent)	Telephone
Signature		45,686	(949) 672-6119
Name (Print/Type)	Joshua C. Harrison, Ph.D., Esq.		Date December 18, 2006

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Appln. of: Raffi Codilian
 Serial No.: 10/724,299
 Filing Date: 11/26/2003
 For: DISK DRIVE PRINTED CIRCUIT
 BOARD WITH COMPONENT-DEDICATED
 ALIGNMENT LINE INDICATORS
 INCLUDING INNER AND OUTER LINE
 SEGMENTS

Art Unit: 2841
 Examiner: Yuriy Semenenko
 Confirmation No.: 1174
 Docket No.: K35A1398

MAIL STOP APPEAL BRIEF - PATENTS
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 CFR § 41.37**I. Real Party in Interest**

Western Digital Technologies, Inc.
 20511 Lake Forest Drive, E-118G
 Lake Forest, CA 92630
 USA

II. Related Appeals and Interferences

No other appeals or interferences are currently known to Appellant that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the present appeal.

III. Status of Claims

Claims 1-6 and 16-20 are pending in the application, with claims 7-15 being cancelled.

No claims have been allowed. The rejection of claims 1-6 and 16-20 is the subject of this appeal.
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Art Unit 2841
Serial No.: 10/724,299Appeal Brief Under 37 CFR § 41.37
Attorney Docket No.: K35A1398**IV. Status of Amendments**

No claim amendments were filed subsequent to the final rejection mailed June 30, 2006. All previously-filed claim amendments have been entered.

Claims 1-6 and 16-20 are provided in the attached Claims Appendix.

V. Summary of Claimed Subject Matter

Claims 1 and 16 are independent claims that are being appealed.

Claim 1 is directed to a disk drive printed circuit board for better defining a perimeter on its mounting surface to facilitate proper positioning and alignment when mounting a disk drive electrical component. For example, Figure 1 illustrates a printed circuit board assembly 14 upon which an electrical component 32 is mounted. The component 32 "defines a rectangular perimeter 34" as is discussed in paragraph [0028] and shown in Figure 3 of Appellant's specification.

Specifically, claim 1 calls for a "board body" and a "mounting surface disposed upon the board body" such as the board 26 and the surface 30 shown in Figure 1. Claim 1 further calls for a "component-dedicated alignment line indicators visibly disposed at the mounting surface for aligning the disk drive electrical component at the mounting surface." Exemplary use of such alignment line indicators is shown in Figures 4-11 and is described in paragraphs [0029] to [0031]. Claim 1 calls for these alignment line indicators to include "first and second inner line segments" that are spaced apart less than the diagonal distance defined by the perimeter as well as "third and fourth inner line segments" that are also spaced apart less than the diagonal distance. Exemplary inner line segments as called for in claim 1 can be seen in Figure 4 with lines 54, 56, 58, and 60 with the limiting diagonal being shown as "D" in Figure 3. Paragraph [0029] explains the positioning of these inner line segments and their sizing relative to the perimeter shown in Figure 3 and defined (e.g., "component-dedicated") by the electrical component 32. Claim 1 further calls for "first and second outer line segments disposed parallel to the first and second inner line segments" and "spaced apart a first outer spacing more" than the spacing of the first and second inner line segments and less than the diagonal distance.

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Examples of such outer line segments are shown with lines 62 and 64 in Figure 4 that are spaced apart from and parallel to the inner line segments 54 and 56. These outer line segments are again described in paragraph [0029].

The “component-dedicated alignment line indicators” of claim 1 are particularly suited for signifying proper installation of a component 32 (such as a sensor or the like) “both in terms of translational positioning and rotational positioning” as noted in paragraph [0036]. The examples shown in Figures 6-11 and described in paragraphs [0037] to [0044] explain some of the uses of the assembly 14 and its advantages over prior devices including allowing “for a higher degree of differentiation between translational and rotational positioning errors” (see, paragraph [0040], lines 12-18, for example).

Independent claim 16 is directed to a hard drive circuit board such as but not limited to assembly 14 of Figure 1 that is useful for mounting a disk drive electrical component such as component 32 with a rectangular mounting base. Claim 16 calls for a “rigid board body” such as the board body 28 of Figure 1, and a “mounting surface” such as surface 30 of Figure 1 is provided on the body. Claim 16 is similar to claim 1 in that it calls for “four inner line segments” such as lines 54, 56, 58, and 60 of Figures 4, 12, and 13. These lines “define a rectangle having a width and a length at least as large as a width and a length of the base of the electrical component” as is described in paragraphs [0028] and [0029] such that the inner line segments are component specific or are sized and shaped based on the electrical component. Claim 16 further calls for “a pair of outer line segments disposed parallel to and spaced apart from two opposing ones of the inner line segments” with the two opposing ones of the inner line segments. With reference to Appellant’s Figure 13, these outer lines may be the pair of lines 62 and 64 or the pair of lines 66 and 68. As with claim 1, each of these line segments is “disposed upon the mounting surface” and is not merely part of the electrical component. As explained in paragraph [0031], the line segments or indicators may be “silk screened upon the mounting surface 30 of the printed circuit board 26” or otherwise disposed “upon” the mounting surface.

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Art Unit 2841
Serial No.: 10/724,299Appeal Brief Under 37 CFR § 41.37
Attorney Docket No.: K35A1398**VI. Grounds of Rejection to be Reviewed on Appeal**

Claims 1-4 stand rejected under 35 U.S.C. §102.

Claims 5 and 6 stand rejected under 35 U.S.C. §103.

Claims 16-20 stand rejected under 35 U.S.C. §103.

VII. Argument**Rejection of Claims 1-4 is Improper Under 35 U.S.C. §102 Based on Sakamoto**

In the final Office Action of July 26, 2006, claims 1, 3-6, 8, 11-15, 17-20, 22, 23, and 25-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. Appl. Publ. No. 2002/0050397 ("Sakamoto"). This rejection is traversed based on the following remarks, and Appellant requests that the rejection be reversed as not properly supported.

In the Amendments of May 12, 2006 and August 17, 2006, Appellant explained as an initial matter that Sakamoto does not teach or discuss alignment of electrical components on a printed circuit board. Instead, Sakamoto discusses a method for better controlling the temperature of a semiconductor module on a flexible sheet of a disk drive. This is a very different problem than addressed by Appellant, and Sakamoto does not discuss accurate aligning but teaches instead enhanced heat dissipation. To this end, Sakamoto shows in Figures 1A, 1B, 2A, 2B, and 2C a flexible sheet 11 made up of two insulating sheets P1 and P2 between which pad electrodes PD are sandwiched. A first opening OP is cut in the sheet P2 to expose the pads PD and a hole 13 is cut through both sheets P1 and P2. A semiconductor module 10 is mounted on the flexible sheet 11 with a portion contacting the pads PD and a portion extending through the hole 13 to mate with a radiation substrate 13A.

After this initial discussion as to the teaching of Sakamoto, the Amendments distinguished Sakamoto by discussing specific elements and claim language of claim 1 that are not shown or even suggested by Sakamoto. However, the Response to Arguments presented on page 2 of the final Office Action of June 30, 2006 only addressed the introductory or background portion of Appellant's remarks and failed to rebut Appellant's specific arguments that several claim limitations are not shown by Sakamoto. Specifically, the Examiner stated in his response

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that "accuracy" is discussed as being important in the background of Sakamoto and then argues that the Sakamoto structures are "capable of performing the intended use" so the structure meets the claim limitations. This argument that if Sakamoto could be used to perform the claimed function it must teach the claimed structure was repeated in the Advisory Action. However, the Amendments made it clear that Sakamoto fails to teach all the limitations of claim 1. The following remarks restate arguments previously made by Appellant and stress the failings of Sakamoto to teach each and every claim limitation as required under 35 U.S.C. §102. Based on these remarks, Appellant requests that the rejections of claims 1-4 based on Sakamoto be reversed.

Claim 1 calls for "component-dedicated alignment indicators" disposed on the mounting surface of a circuit board body. Sakamoto fails to teach any "indicators visibly disposed at the mounting surface" as called for in claim 1. The final Office Action cites Sakamoto in Fig. 1 and its "circuit board 11" as showing these indicators for use with component 10. However, as seen in Figures 1A, 1B and 2A, Sakamoto teaches a flexible sheet 11 that includes no visible indicators on its surface for aligning component 10. Instead, Sakamoto teaches that an opening OP is cut through its insulating sheet P2 and another opening 13 is cut through another insulating sheet P1. There are no alignment lines provided on the surface of sheet P2, but, instead in Figure 1A, it is shown that the component 10 is mounted to the surface of sheet P2 exterior to opening OP (e.g., see dashed lines indicating where component 10 would be mounted on the surface of sheet P2). As can be seen clearly in Figure 1A, there are no visible alignment line indicators provided on flexible sheet 11. For this reason alone, claim 1 is not anticipated by Sakamoto.

The Response to Arguments in the final Office Action and the Advisory Action provide no response to this argument, and the final Office Action of June 30, 2006 simply restates the prior rejection of claim 1. Looking again at this rejection, the Examiner presents a Fig. 1 and a Fig. 2 that correspond to Sakamoto's Figures 2A and 2C, respectively. Fig. 1 of the Office Action is used to assert that the first and second outer line segments are shown by the edges of the flexible sheet 11. However, these are physical edges of the board and are not "visibly disposed at the mounting surface." Fig. 1 provided by the Examiner in the Office Action includes a solid line that is used to show the measurements of first and second inner spacings.

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However, this line is shown dashed in Fig. 2A of Sakamoto as it represents the hidden outer sides or edges of component 13A, which according to para. [0123] of Sakamoto is a radiation substrate. This radiation substrate 13A is mounted on the flexible sheet 11 on the opposite side of the flexible sheet 11 relative to semiconductor device 10. Hence, the solid line shown in the Office Action's Fig. 1 is **not actually present as a visibly disposed line on a mounting surface** of sheet 11, and as a result, the indicator lines of claim 1 are not shown in the Examiner-generated Fig. 1 of the final Office Action and are not shown in Sakamoto's Fig. 2A.

Fig. 2 of the Office Action points to layer P2 of Sakamoto and to the edge of device 10 as showing the "Component-dedicated alignment line indicator." These cited features are different than the solid line shown in Fig. 1 of the Office Action, but these features also fail to show "visibly disposed" line indicators "at the mounting surface" as called for in claim 1. Specifically, the side of the device 10 itself is not even near the mounting surface until the device is mounted and would not assist in alignment of itself without additional visibly disposed indicators. The layer P2 also fails to show the visibly disposed line indicators. Fig. 1A of Sakamoto shows that layer P2 of sheet 11 provides the mounting surface for the device 10, and this can be seen by dashed lines that show that the corners of device 10 rest on the layer P2 with the recessed surface OP below it (such mating of device 10 and the upper surface of layer P2 is further shown in Sakamoto in Fig. 2B). As can be seen, layer P2 provides the mounting surface, but, as shown in Fig. 1A of Sakamoto, there are no visibly disposed line indicators, and the edge of OP cannot reasonably be said to be a line indicator visibly disposed on the mounting surface of layer P2. The only alignment shown by Sakamoto is that the device 10 should be mounted with its corners outside the OP on an upper or mounting surface of layer P2, but such alignment is not achieved with the assistance of any visibly disposed line indicators at the surface of sheet 11. For these additional reasons, Sakamoto fails to teach or suggest each claim limitation presented in claim 1 for the disk drive printed circuit board.

In addition to the requirement that the line indicators be visibly disposed on the mounting surface, claim 1 calls for first, second, third, and fourth line segments in the line indicators on the mounting surface of the board, with the distance between opposing pairs of the lines being based on the electrical component. These four lines are not shown on the surface of 11 (i.e., on either

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the sheet P1 or sheet P2). The final Office Action provides a "Fig. 1" that is the Examiner's marked up version of Sakamoto's Figure 2A. As discussed in the Amendments and Pre-Appeal Brief Request for Review, Appellant disagrees with the Examiner's construction of Sakamoto's Figure 2A provided as Fig. 1 in the final Office Action. Specifically, the Office Action's Fig. 1 is labeled such that apparently the four inner lines are shown by a rectangle that has "first inner spacing" and "second inner line spacing." However, as discussed above, it appears that this rectangle coincides with the dashed lines in Sakamoto's Figure 2A that show the radiation substrate 13A. The radiation substrate 13A is shown in dashed lines in Figure 2A because it is **hidden from view and is not provided on the surface of flexible sheet 11**. There are no lines "visibly disposed" on the mounting surface of flexible sheet 11 that can be said to teach the four inner line segments called for in claim 1. For this additional reason, Sakamoto fails to anticipate the printed circuit board of claim 1. The Response to Arguments and Advisory Action failed to rebut this argument, and Appellant requests that the rejection be reversed as unsupported.

Further, in claim 1, a disk drive printed circuit board is claimed that includes a board body and a mounting surface disposed on the board body. Sakamoto teaches mounting on a flexible sheet 11 and not a board body of a printed circuit board (e.g., the final Office Action does not assert that alignment line indicators are shown on the printed circuit board 112 of Figure 25 but instead on flexible sheet 11 of Figure 1A). For this reason alone, claim 1 is not anticipated by Sakamoto, and the rejection should be reversed. The Response to Arguments failed to address this deficiency of Sakamoto or to address this argument.

Claims 2-4 depend from claim 1 and are believed allowable over Sakamoto at least for the reasons provided for allowing claim 1. Further, claim 3 calls for the line indicators to include a third outer line segment. The final Office Action indicates that this third line segment is shown by another physical edge of the flexible sheet 11. As discussed above, a visibly disposed line segment is not shown by an edge for at least the reason that an edge of a surface or sheet is not on the mounting surface of the sheet. In other words, there would be no reason to provide visible line indicators if acceptable and practical alignment could be achieved by using the edges of a circuit board. For this additional reason, claim 3 is not anticipated by Sakamoto.

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Appeal Brief Under 37 CFR § 41.37
Attorney Docket No.: K35A1398

Rejection of Claims 5 and 6 Under 35 U.S.C. §103 is Improper Based on Sakamoto In View of Bonin

Also, in the final Office Action of June 30, 2006, claims 5 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sakamoto as applied to claim 1 further in view of U.S. Pat. No. 6,798,609 ("Bonin"). Claims 5 and 6 depend from claim 1 and are believed allowable over Sakamoto at least for the reasons provided for allowing claim 1 over Sakamoto.

Further, Bonin does not overcome the deficiencies of Sakamoto discussed above with reference to claim 1, and claims 5 and 6 are believed allowable over the teaching of these two references. In the final Office Action, Sakamoto is described by the Examiner as failing to show the component-dedicated alignment line indicators that include fourth outer line segments having the characteristics called for in claims 5 and 6, and Bonin is cited as overcoming these deficiencies in the base reference.

However, as is the case for Sakamoto, Bonin fails to show any visibly disposed indicator lines on its mounting surfaces. The final Office Action cites Bonin with reference to Figure 3 and the beams 33 and 35, but there is no discussion in Bonin regarding providing four inner indicator lines having a particular spacing and then providing two outer line segments. Hence, the combined teaching of Sakamoto and Bonin would not provide the circuit board of claim 1. Claim 5 calls for third and fourth outer line segments and neither Sakamoto nor Bonin provide such teaching. The Examiner at the middle of page 7 of the final Office Action asserts that such teaching is provided by "any lines close to a disk drive electrical components" such as beams 33 and 35. However, there is no teaching in Bonin that these beams are provided as alignment indicators or that they would be useful for such a purpose, but the beams 33 and 35 are instead described as being deformable connectors for connecting inner frame 40 to outer frame 38 in lines 59-67 of col. 2. The beams 33 and 35 fail to teach the third and fourth indicator lines of claims 5 and 6. Bonin also fails to overcome the deficiencies of Sakamoto noted with reference to claim 1 (i.e., where are the first and second indicator lines of claim shown in Bonin?). The Response to Arguments provided in the final Office Action fails to address these arguments that distinguish Bonin from claims 5 and 6. For these reasons, Sakamoto in view of Bonin fails to teach or suggest the boards of claims 5 and 6, and the rejection should be reversed.

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Appeal Brief Under 37 CFR § 41.37
Attorney Docket No.: K35A1398

Rejection of Claims 16-20 Under 35 U.S.C. §103 is Improper Based on Sakamoto In View of Bonin

The final Office Action further rejected claims 16-20 under 35 U.S.C. §103(a) as being unpatentable over Sakamoto in view of Bonin.

Independent claim 16 includes limitations similar to claim 1, and the reasons provided for allowing claim 1 over Sakamoto are believed equally applicable to claim 16. As discussed above with reference to claims 5 and 6, Bonin fails to overcome the deficiencies of Sakamoto discussed with reference to claim 1.

Claim 16 also calls for the inner line segments disposed upon the mounting surface to define a rectangle that is at least as large as the base of the electrical component. The final Office Action cites Fig. 1 provided in the Office Action, but the only rectangle cited is the outline of component 13A which is not on the mounting surface of sheet 11, and as a result cannot be said to show the four inner line segments of claim 16. For these reasons, claim 16 and claims 17-20, which depend from claim 16, are not shown or suggested by the combined teaching of the two cited references.

Additionally, claim 17 includes limitations similar to claim 5, and, as a result, the reasons provided for allowing claim 5 over Sakamoto and Bonin are applicable to claim 17.

Claim 19 specifically calls for the line segments to be applied using silk screening. The Examiner argues in the final Office Action that this is a mere process limitation in a product claim and asserts that it is only a limitation to the degree that it defines the product itself. However, the Examiner did not appear to give this limitation any patentable weight. Appellant asserts that this limitation clarifies or further supports the claim construction that the indicator lines actually are on the mounting surface and not simply an edge or part of a later mounted component or a hole in a board as are the components of the references being cited by the Examiner. The Examiner has yet to cite a reference that shows line segments being applied to a mounting surface by any technique, let alone by silk screening. For these additional reasons, claims 17 and 19 are believed allowable over the combined teaching of Sakamoto and Bonin.

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DEC 18 2006

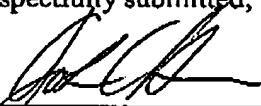
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Conclusion

In view of the above remarks, the pending claims are believed allowable and the case in condition for allowance. Appellant respectfully requests that the rejections of all pending claims be reversed.

Respectfully submitted,

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By: 

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VIII. CLAIMS APPENDIX

1. A disk drive printed circuit board for use with a disk drive electrical component, the disk drive electrical component defining a rectangular perimeter, the perimeter including opposing first and second edges defining a first lateral distance, the perimeter further including opposing third and fourth edges defining a first lateral distance, the perimeter further including opposing third and fourth edges extending between the first and second edges and defining a second lateral distance, the perimeter further including opposing corners defining a diagonal distance, the printed circuit board comprising:

 a board body;
 a mounting surface disposed upon the board body; and
 component-dedicated alignment line indicators visibly disposed at the mounting surface for aligning the disk drive electrical component at the mounting surface, the component-dedicated alignment line indicators including:

 first and second inner line segments spaced apart a first inner spacing at least the first lateral distance and less than the diagonal distance;

 third and fourth inner line segments extending between and perpendicular to the first and second inner line segments, the third and fourth inner line segments spaced apart a second inner spacing at least the second lateral distance and less than the diagonal distance; and

 first and second outer line segments disposed parallel to the first and second inner line segments with the first and second inner line segments between the first and second outer line segments; the first and second outer line segments spaced apart a first outer spacing more than the first inner spacing and less than the diagonal distance.

2. The printed circuit board of Claim 1 wherein the third and fourth inner line segments intersect the first and second inner line segments.

3. The printed circuit board of Claim 1 wherein the component-dedicated alignment line indicators further includes a third outer line segment extending between and perpendicular to the first and second outer line segments, the third outer line segment is disposed with the third

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inner line segment between the third edge of the disk drive component and the third outer line segment.

4. The printed circuit board of Claim 3 wherein the third outer line segment intersects the first and second outer line segments.

5. The printed circuit board of Claim 1 wherein the component-dedicated alignment line indicators further includes third and fourth outer line segments extending between and perpendicular to the first and second outer line segments, the third and fourth inner line segments spaced apart a second outer spacing at least the second lateral distance and less than the diagonal distance.

6. The printed circuit board of Claim 5 wherein the third and fourth outer line segments intersect the first and second outer line segments.

16. A hard drive circuit board for use with a disk drive electrical component with a rectangular mounting base, comprising:

a rigid board body;

a mounting surface on the board body;

four inner line segments disposed upon the mounting surface, wherein the four inner line segments define a rectangle having a width and a length at least as large as a width and a length of the base of the electrical component; and

a pair of outer line segments disposed parallel to and spaced apart from two opposing ones of the inner line segments with the two opposing ones of the inner line segments being positioned between the pair of outer line segments.

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17. The circuit board of claim 16, further comprising an additional pair of outer line segments disposed parallel to and spaced apart from an additional two opposing ones of the inner line segments other than the two opposing ones of the inner line segments, with the additional two opposing ones of the inner line segments being positioned between the additional pair of outer line segments.

18. The circuit board of claim 17, wherein the inner line segments and the outer line segments are visibly disposed on the mounting surface.

19. The circuit board of claim 18, wherein the inner line segments and the outer line segments are applied to the mounting surface using silk screening.

20. The circuit board of claim 16, wherein the rectangle formed by the four inner line segments is sized to circumscribe the base of the electrical component when the electrical component is centered within the four inner line segments.

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IX. EVIDENCE APPENDIX

No copies of evidence are required with this Appeal Brief. Appellant has not relied upon any evidence submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132.

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X. RELATED PROCEEDINGS APPENDIX

There are no copies of decisions rendered by a court or the Board to provide with this Appeal as there are no related proceedings.